



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY 11 2010

MEMORANDUM

SUBJECT: Pioneer Sand Site
Explanation of Significant Differences

FROM: Pete Thorpe, RPM *RET*
Superfund Remedial Branch

TO: Franklin Hill, Director
Superfund Division

The purpose of this memorandum is to present an Explanation of Significant Differences (ESD) for the Pioneer Sand Superfund Site (the Site) located in Warrington, Escambia County, Florida for your concurrence. The site-wide Record of Decision (ROD) was signed on September 26, 1986. This ESD is needed to document issues concerning Institutional Controls (ICs) and clarification of the cap performance monitoring standards at the Site.

The major components of the remedy selected in the 1986 ROD are pumping the sludge pond water to a settling/filtration basin prior to discharging the clean effluent to the large pond on site, placing a natural cap on the fill and sludge pond areas, and implementing a ground water monitoring/sampling program.

ICs in the form of a conservation easement have been implemented at the Site because the remedial action results in hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE) to soil. The remedial action selected in the ROD did not include ICs. As a result, an explanation of significant differences is needed to include ICs in the form of a conservation easement as part of the soil remedy for the Site. The easement assures the integrity and maintenance of the remedy implemented at the Site. The restrictions and covenants of this easement constitute a perpetual servitude on the property and run with the property.

The ROD included the parameters the groundwater would be analyzed for, but not the specific Contaminants of Concern (COCs). The ROD stated that the COCs will be finalized in the Site's O&M plan. The COCs for the Site were stated in the 1990 O&M Plan. The Federal Maximum Contaminant Levels (MCLs) and Florida Drinking Water Standards in place in 1990 were used in the 1990 O&M Plan to establish the performance monitoring standards for the cap. This ESD modifies the 1990 O&M performance monitoring standards for the seven COCs to the most current standards.

EPA has prepared this ESD in cooperation with the Florida Department of Environmental Protection (FDEP). EPA believes the remedy as set forth in the ROD and as clarified by this

ESD remains protective of human health and the environment. Since this action only incorporates the ICs and clarification of cap performance monitoring standards, but no change in the treatment technology or remedial action objectives, it does not represent a fundamental change to the selected remedy.

Attached is a copy of the fact sheet that will be distributed to the public. I recommend that you concur with this ESD so that it may be added to the Administrative Record.

Attachment

Concurrence:

A handwritten signature in blue ink, appearing to read "Franklin E. Hill", is written over a horizontal line.

Date:

5/11/10

Franklin E. Hill
Director
Superfund Division

US EPA, Region 4

Atlanta, GA

EXPLANATION OF SIGNIFICANT DIFFERENCES

PIONEER SAND

OPERABLE UNIT 1

Warrington, Escambia County, Florida

May 2010



This Explanation of Significant Differences Fact Sheet will tell you about:

- Background information
- Details about the selected remedy
- Changes to the selected remedy

INTRODUCTION AND PURPOSE

This Explanation of Significant Differences (ESD) is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Section 300.435(c)(2)(I). The Director of the Superfund Division has been delegated the authority to sign ESDs. This ESD addresses issues concerning institutional controls (ICs) and the cap performance monitoring standards for the Site.

The purpose of this ESD is to notify all parties of concern that the US Environmental Protection Agency (EPA), as the lead agency, with the support of Florida Department of Environmental Protection (FDEP), is enacting a significant change to the remedy concerning ICs and clarification of the cap performance monitoring standards at the Site.

The purpose of this ESD is to document a final decision to include ICs in the form of a conservation easement and to clarify the cap

performance monitoring standards for the Site.

EPA prepares an ESD when it is determined by the Agency that changes to the original selected remedy are significant, but do not fundamentally alter the remedy selected in the ROD with respect to scope, performance, or cost.

ADMINISTRATIVE RECORD

The Administrative Record contains the information upon which the remedy selection was based, including the Record of Decision and the Responsiveness Summary. This ESD and the supporting information will become part of the Administrative Record in accordance with 40 CFR §300.825(a)(2) and 40 CFR §300.435(c)(2)(i)(A) of the National Contingency Plan. The Administrative Record documents are available for public review and copying in the Site Information Repositories located at the following addresses:

Pensacola Public Library
200 West Gregory Street
Pensacola, Florida 32502
Monday to Thursday, 9 AM to 8 PM
Friday to Saturday, 9 AM to 5 PM
Sunday, 2 PM to 7 PM
Phone (850) 436-5060

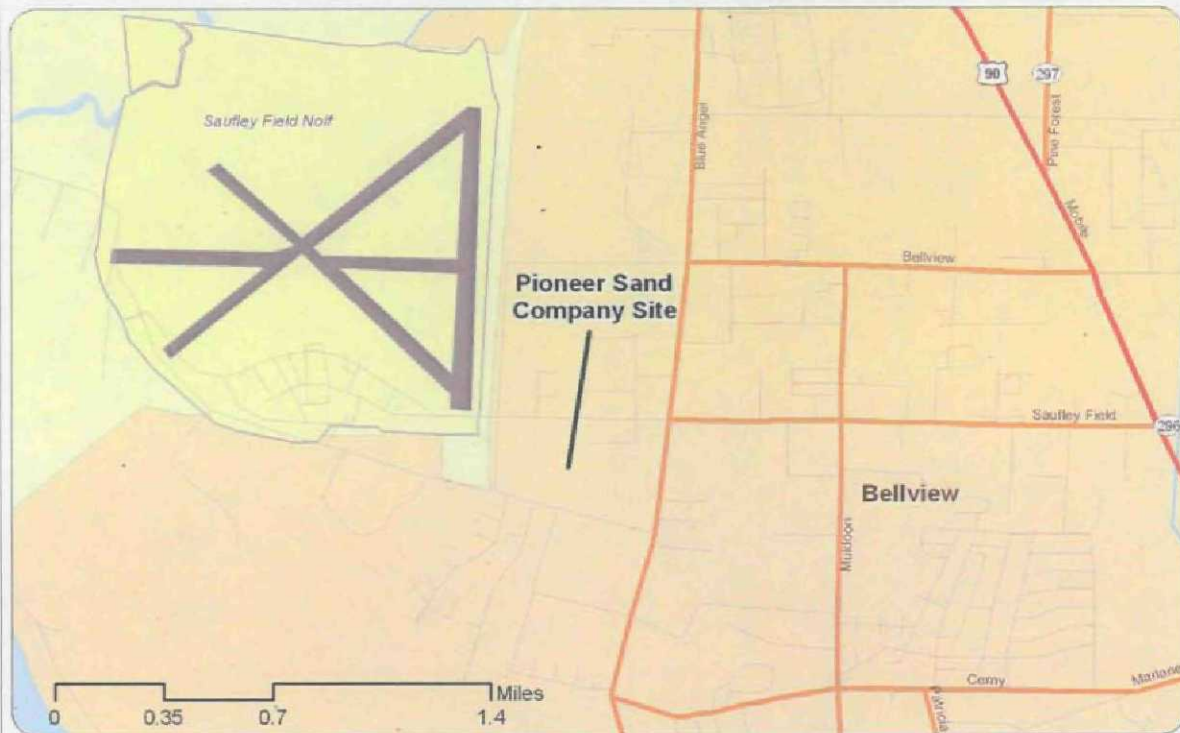


Figure 1
Site Vicinity Map

Pioneer Sand Co. Superfund Site
Warrington, Escambia County, FL



Legend

- | | | |
|-------------------------------|------------------------------|------------------------|
| --- Site Boundary/Outer Fence | ▲ Gas Venting System | --- Landfill (approx.) |
| ● Monitoring Wells | → Leachate Collection System | ● Inner Fence |



Figure 2
Site Map

Pioneer Sand Co. Superfund Site
Warrington, Escambia County, FL

US EPA Region 4 Records Center
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303
Monday to Friday, 7:30 AM to 4:30 PM
Phone (404) 562-8835

SITE BACKGROUND

History

The 11-acre Pioneer Sand Company Site is an inactive quarry licensed in 1974 to receive shredded auto parts, construction debris, and various industrial sludges. Between 1974 and 1978, phenols and resin compounds were disposed on the Site by Newport Industries, currently Reichold Chemical. Domestic and industrial wastes, including plating sludges, were received from the Pensacola Naval Air Station. Approximately 75 percent of the Site is an excavation pit, while the remaining 25 percent is the fill area where wastes were deposited.

In 1981, the Florida Department of Environmental Regulations (now the Florida Department of Environmental Protection [FDEP]) did not renew the disposal permit and ordered the dumping to cease. Subsequent environmental sampling detected contamination in the soil. A monitoring well installed by the company and one of the on-site disposal ponds were also found to be contaminated. Sampling of nearby private wells indicated no off-site groundwater contamination.

Based on the observed contamination, the Site was listed on the National Priorities List (NPL) in 1983 and underwent numerous investigations and clean up in the late 1980s and early 1990s. Clean up activities were completed in early 1991, and the Site was deleted from the NPL on February 8, 1993.

Three Five-Year Reviews (FYRs) have been completed since 1993. The third FYR was signed on December 10, 2009. One of the recommendations in the FYR was to issue an ESD to include ICs in the remedy and to clarify the cap performance monitoring standards.

Site Contamination

The contaminants found at this Site were cadmium, chromium, benzene, toluene, chlorobenzene, ethylbenzene and xylenes in the soil and groundwater. Some or all of the contaminants identified are hazardous substances as defined in Section 104(14) of CERCLA, 42, U.S.C. Section 9601(14), and 40 C.F.R. Section 302.4. Approximately 7,547 cubic yards of contaminated soil and sludge were identified on-site.

SELECTED REMEDY

A Record of Decision (ROD) was signed on September 26, 1986. The Site consists of one operable unit. The ROD is available in the Superfund Document Management System (SDMS) under Record Number 10685278.

The ROD identified the following as the Remedial Action Objectives:

- maintain or improve the surface and ground water quality on-site;
- maintain the natural ground water quality adjacent to the Site;
- minimize leachate generation within the fill material by limiting ground water percolation through the fill material;
- minimize human contact with the sludges and small pond waters; and
- protect future surface and ground water quality by establishing a monitoring program to detect changes in surface water quality on-site and ground water

quality both on-site and off-site (ROD Table 8).

The major components of the remedy selected in the 1986 ROD are listed below:

- pumping the sludge pond water to a settling/filtration basin prior to discharging the clean effluent to the large pond on-site;
- placing a natural cap on the fill and sludge pond areas; and
- implementing a ground water monitoring and sampling program to operate during the remedial design and construction phase and post closure.

EXPLANATION OF SIGNIFICANT DIFFERENCES

ICs in the form of a conservation easement have been implemented at the Site because the remedial action results in hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE) to soil. The remedial action mentioned in the ROD did not include ICs. As a result, an explanation of significant differences is needed to include ICs in the form of a conservation easement as part of the soil remedy for the Site.

The conservation easement was signed by Mr. and Mrs. Dugger in 1992. The purpose of this easement is to assure the integrity and maintenance of the remedy implemented at the Site. The major restrictions in the easement prohibit cap cover disturbance, construction activities and the alternation of the drainage patterns over the entire site. The restrictions and covenants of this easement constitute a perpetual servitude on the property and run with the property.

The 1986 ROD specified that the ground water monitoring include the following indicator parameters: chromium, zinc, lead, priority pollutant acid extractables, priority pollutant purgeables, pesticides, and PCBs. At the time of the ROD, these contaminants were considered the most common and mobile found on-site. The ROD included the parameters the groundwater would be analyzed for, but not the specific contaminants of concern (COCs). The ROD stated that the COCs will be finalized in the Site's O&M plan.

The COCs for the Site were stated in the 1990 O&M Plan. The Federal Maximum Contaminant Levels (MCLs) and Florida Drinking Water Standards in place in 1990 were used in the 1990 O&M Plan to establish the performance monitoring standards for the cap. The 1990 O&M Plan specified the cap performance monitoring standards selected for cadmium, chromium, benzene, toluene, chlorobenzene, ethylbenzene, and xylenes (Table 1). These seven COCs were selected in the 1990 O&M plan because these contaminants were the only ones detected in all of the parameters sampled. Performance monitoring standards for cadmium and chromium were based on the higher of the background well samples or the 1990 Florida Drinking Water Standards. Performance monitoring standards for the other five organic COCs were selected based on Florida Drinking Water Standards and Florida Guidance Concentrations in 1990.

The current MCLs for chromium (total), toluene, chlorobenzene, ethylbenzene and xylenes are all less stringent than the original 1990 O&M performance monitoring standards. There has been no change in the standards for benzene. The current MCL for total cadmium is more stringent than the original 1990 O&M performance monitoring

Table 1: Previous and Current Cap Performance Monitoring Standards for Groundwater COCs

Contaminant of Concern	1990 O&M Performance Monitoring Levels (mg/L)	Current Performance Monitoring Levels (mg/L)	Changed?
Cadmium (total)	Higher of background well and 0.05	0.005 ¹	More stringent
Chromium (total)	Higher of background well and 0.001	0.1 ¹	Less stringent
Benzene	0.001	0.001 ²	No
Toluene	0.024	1.0 ¹	Less stringent
Chlorobenzene	0.010	0.1 ¹	Less stringent
Ethylbenzene	0.002	0.7 ¹	Less stringent
Xylenes	0.050	10.0 ¹	Less stringent
1. The Maximum Contaminant Level (MCL) under both the Federal Safe Drinking Water Act and the Florida Drinking Standards as of August 2009. 2. The more stringent Florida Drinking Water Standard is included in this Table. The Federal MCL for benzene, as of August 2009, is 0.005 mg/L.			

standards. This ESD modifies the 1990 O&M performance monitoring standards for the seven COCs to the most current standards (Table 1). This change in the MCL does not affect the protectiveness of the remedy. Monitoring data indicates that no exceedances of the current monitoring levels are occurring.

SUPPORT AGENCY COMMENTS

Throughout the project, EPA has coordinated with the State of Florida. FDEP has provided input during the development of this ESD and concurs with this modified remedy.

AFFIRMATION OF THE STATUTORY DETERMINATION

The modified remedy satisfies CERCLA Section 121. Based on monitoring data in the Five Year Reviews, EPA and FDEP believe that the remedy remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and

is cost effective. The lifecycle costs for enforcing ICs are not major costs increases and the clarification of cap performance monitoring standards has little to no cost associated with it. In addition, the revised remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

Statutory five year reviews of the site will continue to ensure that the remedy is, or will be, protective of human health and the environment.

PUBLIC PARTICIPATION

This ESD is being made available to the public in accordance with the requirements of the National Contingency Plan §300.435(c)(2)(i). As required by Section 300.435(c)(2)(i)(B) of the NCP, a notice of availability has been placed in the Pensacola News Journal newspaper and copies of this ESD are available at the Pioneer Sand Site Information Repository. Copies of this Fact Sheet also have been distributed to the community mailing list for the Site.

For more information, please contact...

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200 West Gregory Street

Pensacola, Florida 32502

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REFERENCES

United States Environmental Protection Agency, *Record of Decision*, September 1986.

State of Florida, Escambia County, Conservation Easement, 1992.